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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,789	08/27/2003	Yoshiro Mikami	62807-138	4491
7590 MCDERMOTT, WILL & EMERY 600 13th Street, N.W. Washington, DC 20005-3096			EXAMINER HOLTON, STEVEN E	
			ART UNIT 2629	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	02/28/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/648,789	MIKAMI ET AL.	
	Examiner	Art Unit	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 30 November 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 1,4,5 and 9-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,4,5 and 9-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

<ol style="list-style-type: none"> <li>1)<input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2)<input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3)<input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.</li> </ol>	<ol style="list-style-type: none"> <li>4)<input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.</li> <li>5)<input type="checkbox"/> Notice of Informal Patent Application</li> <li>6)<input type="checkbox"/> Other: _____.</li> </ol>
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## DETAILED ACTION

1. This Office Action is made in response to applicant's amendment filed on 11/30/2006. Claims 1, 4, 5, and 9-14 are currently pending in the application. An action follows below:

### *Response to Arguments*

2. Applicant's arguments filed 11/30/2006 have been fully considered but they are not persuasive in light of the amendments to the claims.

The Examiner disagrees with the statement that the Minolta reference lacks an equivalent to a screen rewrite request signal for the operation of the low power display device. The Minolta display inherently must have some command or signal that indicates the beginning of a screen rewrite phase. Without such a command or signal the display would not know when to begin a screen rewrite and the data for the next image would be held indefinitely by the computer. The methods shown in Figs. 3, 6, 9, and 12 of the Minolta reference show the operation of the display during an image rewrite period. To begin those methods there must be a command or signal indicating the beginning of the redraw method. That signal corresponds to a 'screen rewrite request signal'. The logical product of at signal and the power detection signal that is tested within the image redraw operation either allows or disallows the redrawing of the display based on the stored power within the display. If no redraw signal is transmitted than the display is not updated. If the redraw signal is transmitted then the display is redrawn if sufficient power is stored within the power system, otherwise the screen is

not redrawn. Finally, regardless of if enough power is stored within the power system, a redraw of the screen will not occur without a signal to begin the operation of a redraw method. Thus, even though the Minolta reference does not expressly name a redraw/refresh signal indicating the beginning of a redraw method. There would inherently be a redraw signal to indicate the beginning of the operation of the redraw methods. And the logical product of the states of the redraw signal and the power storage reading would allow or disallow the operation of the display device.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Minolta (JP 2001066573 also USPN: 7088355).

The Examiner provided a machine translation for the Minolta reference as part of the Office Action mailed on 6/30/2006. The paragraph information used within the rejection refer to the JP 2001066573 machine translation document. The Examiner notes that the patent document USPN: 7088355 is the US filing of the Japanese reference.

Regarding claim 1, Minolta discloses a display device with a liquid crystal display (Fig. 1, element 10) the display having a matrix of pixels providing a memory nature (detailed description paragraph 2). Minolta also discloses a power supply section (Fig. 1, element 15), a detector for detecting the supply voltage of the power supply (Fig. 1, element 20), and a CPU and memory for providing data and controlling the display device (Fig. 1, elements 25 and 30).

Further Minolta discloses that based on the output of the power supply section the screen is prohibited to be redrawn if the voltage is found to be too low to update the display (paragraphs 18 and 19, also paragraph 6). The examiner notes that a data input circuit is inherent in the display device for inputting data from the CPU and memory to the display device so that images can be displayed. Further, the embodiments of the device with a battery or other type of power supply provide power storage greater than the amount of power needed to update the screen. As discussed in the above response, Minolta does not expressly name a screen rewrite request signal, but there would inherently be a signal or command that would bring the process of the screen redraw method. That signal corresponds to a screen rewrite request signal and the logical product of that signal and the stored power detection would either allow or disallow the redrawing of the screen.

Regarding claim 9, Minolta discloses the power supply being a solar cell (paragraph 19).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 5, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minolta.

Regarding claims 4 and 5, the Examiner notes that the limitations of these claims are essentially identical and considers the claims together.

As discussed above regarding claim 1, Minolta discloses a power supply, display unit, pixels with memory function and control circuit for driving the display unit. Minolta further discloses a power detection unit for determining if the power supplied by the power supply unit is enough for updating the screen and prohibiting the updating of the screen if the power is not enough to update the entire screen.

However, Minolta does not expressly discuss providing moving pictures on the display or still images. Minolta merely updates the display as long as the power supply has enough power to redrawn the entire screen. At the time of invention it would have been obvious to one skilled in the art that the display system described by Minolta could be adapted to provide moving images or sequential still images based on the power provided from the power supply. As long as the voltage from the power supply is judged to be enough to redrawn the display the display may be redrawn at any rate or

speed desired including moving pictures or with a delay between still images. This would have been a matter of design choice to one skilled in the art.

Regarding claims 13 and 14, the Examiner takes Official Notice that it is well known in the art to control computer signals by using transistor switches. It would have been obvious to one skilled in the art to use a switch of some type to transmit a signal indicating the beginning of a screen redraw period when operating the display of Minolta. Without some sort of switch the signal would be unable to change state to differentiate between times to begin a redraw and times between redraw requests.

5. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minolta in view of Doane et al. (USPN: 6518944), hereinafter Doane.

Regarding claims 10 and 11, as discussed above, Minolta discloses all of the limitations except, "wherein the solar cell is an organic thin-film solar cell formed on the same substrate as the display unit is formed". Doane discloses an embodiment of a combined display and solar cell where "a substrate or base material are integrated into a single unit such a unit may advantageously function as both the solar panel assembly and the second or back substrate of the display thereby eliminating the need for a back substrate separate from the solar panel assembly (col. 12, line 64 – col. 13, line 29)." The Examiner notes that Doane discusses that the solar cell "may be silicon or other types of material such as organic solar cell material (col. 13, lines 11-12)."

It would have been obvious to one skilled in the art to combine the teachings of Minolta and Doane to produce a device as specified in claims 10 and 11. The

motivation for doing so would have been to eliminate “the need for a back substrate from the solar panel assembly (Doane, col. 13, lines 1-2)”. The combining of a display unit with solar cell formed on the same substrate along with a display as described by Minolta would produce a device as specified in claims 10 and 11.

Regarding claim 12, Doane mentions that a type of display able to be used with the solar cell and display combination device is one mentioned in an article titled “Amorphous Silicon Thin-Film Transistor Active-Matrix Reflective Cholesteric Liquid Crystal Display” (col. 2, lines 63-67). Further, Minolta mentions that the liquid crystal display used is a standard display device (paragraph 13). The Examiner notes that it is well-known in the art to use thin-film transistors in many display devices to provide active-matrix displays.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven E. Holton whose telephone number is (571) 272-7903. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven E. Holton  
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February 9, 2007

AMR A. AWAD  
SUPERVISORY PATENT EXAMINER

